



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,376	10/10/2002	Robert B. Peterson	KEL-85	1012

7590 07/05/2006

Mr. J.P. Ward
Kellogg Brown & Root, Inc.
601 Jefferson
Houston, TX 77002

EXAMINER

NECKEL, ALEXA DOROSHENK

ART UNIT	PAPER NUMBER
----------	--------------

1764

DATE MAILED: 07/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

8

Office Action Summary	Application No.	Applicant(s)	
	10/065,376	PETERSON ET AL.	
	Examiner	Art Unit	
	Alexa D. Neckel	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 12 and 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 October 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. This application contains claims 12 and 13 drawn to an invention nonelected with traverse in the reply filed September 27, 2005. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1-3 and 5-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Murphy et al. (4,150,090).

With respect to claims 1, 8 and 9, Murphy et al. discloses a catalyst regenerator comprising:

a regenerator vessel (10) housing a dense phase catalyst bed (abstract and col. 5, lines 19-22);

a central upright standpipe (12);

a well pipe (18) receiving a lower end of the standpipe (12) to form an annulus (see figure);

a valve (14) controlling flow from the vertical standpipe to the annulus (col. 3, lines 19-28) and located at the lower end of the standpipe (12) (see figure 1);

a distributor (20) within the well pipe (18);

Art Unit: 1764

a radial slot/arm (26) in the well pipe (18) below the upper surface of the dense bed (col. 3, lines 47-48);

a distributor (38/40) to the dense phase bed located below the radial arms (26);

a discharge outlet (32) from the dense phase bed; and

gas discharge above the bed (col. 4, lines 1-5).

With regard to the distributor in the well pipe as being for fuel and/or fluidizing gas, the material worked upon does not limit an apparatus claim. MPEP 2115.

Additionally, the manner of operating the device does not differentiate the apparatus claims from the prior art. MPEP 2114. As such, the single distributor (20) within the well pipe (18) of Murphy et al. can function to supply more than one feed and therefore reads on the instant claims.

With respect to claim 2, the distributor (38/40) distributes air in a ring around the well pipe (18) and below the radial arms (26).

With respect to claim 3, the small openings in distributor (20) (col. 3, lines 28-31) read on nozzles.

With respect to claims 5-7, Murphy et al. further discloses wherein steam (col. 3, lines 27-28) is supplied to the distributor (20) for fluidization.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 1764

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy et al. (4,150,090) as applied to claim 1 above, and further in view of Ramachandran et al. (5,565,089).

With respect to claim 4, Murphy et al. discloses all of the structure as described above, but fails to disclose a source of fuel oil into the regenerator distributor (20).

Ramachandran et al. also discloses a device for regenerating cracking catalyst and teaches wherein the regenerator should be provided with fuel (col. 4, lines 41-45) in order to quickly obtain the desired operating temperature when the process is started cold (col. 3, lines 17-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a source of fuel to the distributor (20) of Murphy et al. in order to provide a means by which the desired operating temperature can be reached during a cold start.

6. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy et al. (4,150,090) as applied to claim 1 above, and further in view of Castagnos, Jr. et al. (4,062,759).

With respect to claims 10 and 11, Murphy et al. discloses all of the structure as described above, but fails to illustrate the upper portion of the standpipe (12) and how it extends through the regeneration vessel.

Castagnos, Jr. et al. also discloses a device for regenerating cracking catalyst and teaches wherein the substantially vertically downward/standpipe portion of the

Art Unit: 1764

spent-catalyst inlet is connected to an angled conduit (105) to reach the axial center of the regenerator (102) (col. 4, lines 47-59). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an angled portion at the upper end of the standpipe of Murphy et al. since it is merely the selection of a spent catalyst connection means known to the art as taught by Castagnos, Jr. et al. and one would have a reasonable expectation of success in doing so. One would be motivated to look to other catalyst regeneration device spent-catalyst connections since such a connection through the regenerator is not provided by Murphy et al. as well as in order to provide a connection which does not interfere with the upper portion of the regenerator thus leaving room for cyclones and other required elements.

7. Claims 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy et al. (4,150,090) as applied to claim 1 above, and further in view of Chen et al. (6,797,239).

Murphy discloses wherein the radial slot/arms (26) are located at an upper end of the well pipe (18) and are below the level of the catalyst bed (col. 3, lines 47-48), but fails to disclose wherein the slots are also spaced from an annular plate disposed about the standpipe portion above the annulus.

Chen et al. teaches a spent catalyst distributor which is comprised of radial openings (defined between spacers 34) at an upper end of a riser (10) and located between both a lower disk/plate (37) and an upper disk/plate (32) which improves spent catalyst distribution in a regenerator (col. 3, lines 3-6) as compared to a plurality of

Art Unit: 1764

distribution arms (col. 2, lines 55-60). It would have been obvious to one of ordinary skill in the art at the time of the invention to replace the arms of Murphy with the distributor arrangement of Chen et al. in order to achieve the recognized advantages of improved distribution.

Response to Arguments

Restriction

Applicant continues to argue the restriction requirement, which was made Final in the previous Office Action. After a final requirement for restriction, the applicant may petition the Director to review the requirement. Petition may be deferred until after final action on or allowance of claims to the invention elected, but must be filed not later than appeal. A petition will not be considered if reconsideration of the requirement was not requested (see § 1.181).

Drawings

The objection to the drawings is withdrawn due to applicant's amendments to the specification.

Murphy '090

Applicant argues that Murphy does not disclose both a fuel distributor and a fluidization gas distributor within the centerwell.

As asserted in the previous office action with regard to the distributor in the well pipe as being for fuel and/or fluidizing gas, the material worked upon does not limit an apparatus claim. MPEP 2115. Additionally, the manner of operating the device does

Art Unit: 1764

not differentiate the apparatus claims from the prior art. MPEP 2114. As such, the single distributor (20) within the well pipe (18) of Murphy et al. can function to supply more than one feed and therefore reads on the instant claims.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "circular" slot) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

It is noted that the claims recite a "radial slot", not the argued "circular slot". As such, the arms of Murphy extend radially and therefor continue to read on the claims.

Applicant argues that the arms of Murphy are not "slots" according to the definition provided by applicant in their response – a relatively narrow passage.

The examiner respectfully disagrees. During examination claims are given their broadest interpretation, MPEP 2111. The definition of slot argued by applicant is not expressly stated in their specification, therefore the term slot is read broadly. Even so, it is found by the examiner that the radial arms (26) of Murphy are relatively narrow passages.

Ramachandran and Castagnos, Jr.

Applicant does not provide any additional arguments with regard to the secondary references as they have been applied.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexa D. Neckel whose telephone number is 571-272-1446. The examiner can normally be reached on Monday - Thursday from 9:00 AM - 7:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1764

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alexa D. Neckel
Primary Examiner
Art Unit 1764

June 29, 2006


ALEXA DOROSHENK NECKEL
PRIMARY EXAMINER